

WHAT IS CLAIMED IS:

1. A spread illuminating apparatus comprising:
at least one spot-like light source; and
a light conductive plate, which has the at least one spot-like light source disposed close to its light entrance surface, and which allows light emitted from the at least one spot-like light source and introduced therein through the light entrance surface to exit through its light exit surface toward an object to be illuminated, wherein the light exit surface is provided with a light scattering means comprising a plurality of mechanisms which are each formed so as to extend in a direction perpendicular to the light entrance surface, are continuously arrayed in a direction parallel to the light entrance surface, and which are adapted to scatter the light emitted from the at least one spot-like light source with respect to the direction parallel to the light entrance surface, and wherein a surface of the light conductive plate opposite to the light exit surface is provided with an optical path conversion means comprising a plurality of paired slanting surfaces which are formed so as to extend in the direction parallel to the light entrance surface.
2. A spread illuminating apparatus according to Claim 1, wherein the mechanisms of the light scattering means each consist of paired slanting surfaces forming a triangular cross section, and have their respective triangular cross sections defining respective apex angles different from one another.
3. A spread illuminating apparatus according to Claim 1, wherein the mechanisms of the light scattering means each consist of a ridge having its surface arced in cross section, and have their respective ridges differing in dimension and defining different maximum tangential angles with respect to an imaginary major plane of the light conductive plate.
4. A spread illuminating apparatus according to Claim 3, wherein the maximum tangential angles range from 10 to 50 degrees.
5. A spread illuminating apparatus according to Claim 1, wherein the mechanisms of the light scattering means each consist of a ridge multifaceted so as to form a polygonal cross section, and have their respective ridges differing in dimension and in cross sectional configuration.

6. A spread illuminating apparatus according to any one of Claims 1 to 5, wherein the mechanisms of the light scattering means have their surfaces roughened with a plurality of grooves each formed so as to extend in the direction perpendicular to the light entrance surface of the light conductive plate.
7. A spread illuminating apparatus according to Claim 1, wherein the mechanisms of the light scattering means each consist of paired slanting surfaces forming a triangular cross section, and have their respective triangular cross sections defining respective apex angles equal to one another, and the slanting surfaces are roughened with a plurality of grooves each formed so as to extend in the direction perpendicular to the light entrance surface of the light conductive plate.
8. A spread illuminating apparatus according to Claims 6 or 7, wherein the surfaces roughened have an average surface roughness ranging from 0.1 to 1.0 μm .